

Carpenter, Emily

From: Mark C. Bross <mcb@klingner.com>
Sent: Monday, April 27, 2015 3:45 PM
To: Meyers, Leasue
Cc: Carpenter, Emily; Mefrakis, Refaat; LePage, Cindy; Shaw, Byron
Subject: 10 CSR 20-8.200 Wastewater Treatment Lagoons and Land Application - Comments

Leasue:

I promised you some comments on the proposed regulation update for 8.200. Here are my comments:

1. I agree with all of the comments that Elke Boyd submitted, so I will not re-state them here.
2. Based on our meeting on 4/22/2015, we need a good definition for lagoon and what this regulation applies to.
3. There are multiple conflicting application rates for wastewater effluent throughout the proposed regulation. These need to be simplified down to one concise guidance piece on application rates for certain situations.
4. The land application sections need to be grouped together. Right now, the proposed regulation jumps back and forth a couple of times between land application and lagoons.
5. The slopes in 4.B.8.C need to be reviewed in more detail. The maximum slopes should be tied to the type of cover, the application rate, and the limits of the equipment being proposed rather than a simple blanket type statement. For example, if you put 0.2" on per day in a hay field and the slope is 10%, it is not likely to run off. The hydraulic uptake of hay between May and September is 0.3" per day typically. Conversely, if you put 0.5" on per day on a row cropped corn field and the slope is 10%, there could be an issue. Center pivots can handle up to 15% slopes.
6. There is a section titled (7) Lagoon Retrofits in orange with virtually no information in it. I assume that more information will follow prior to the next stakeholder meeting.
7. There is a section titled 3. Mechanical Treatment in orange with no information under it.
8. Section 8.C under Slow Rate Surface Land Application of Wastewater - Sections C and E both talk about soils information and application rates. They should be combined or grouped together. Sections D and E.2 both talk about the storage cell or lagoon and should probably be combined or grouped together.
9. Section 8.E.6 under Slow Rate Surface Land Application of Wastewater talks about application rates that are in conflict with other sections of the proposed rule. Consider combining or eliminating the conflict.
10. Section 8.E.6.C.II and III under Slow Rate Surface Land Application of Wastewater appear to be backwards. A lower permeability soil should not allow a higher application rate.
11. The section on subsurface irrigation indicates that most of it is taken from Tennessee. This needs to be reconciled with the existing DHSS regulations and any changes that they are proposing to their regulations.

12. The term "LPP" is not defined. I am assuming that this means low pressure pipe?.

13. Can drip irrigation be installed on the surface with a layer of soil cover added over the top? This sometimes becomes necessary in our soils in northeast Missouri due to extremely low percolation rates.

14. At the very end of the documentation, it talks about rock or gravel in trenches. This is not commonly used for drip irrigation but is used for low pressure pipe systems. This needs to be cleared up. The differences between LPP and drip irrigation need to be defined. It would appear that both are allowed by DNR. Is this true?

Most of my comments are an attempt to stimulate some more thought on some of these proposed regulations. I think the first meeting was good and some of these can be addressed at the next meeting.

Thanks.

Mark C. Bross, PE
Project Manager

Klingner & Associates, PC
4510 Paris Gravel Road | Hannibal, MO 63401
Office: 573.221.0020 | Fax: 573.221.0012 | www.klingner.com
mcb@klingner.com

